

MULTICAST SERVICE DELIVERY IN A HIERARCHICAL NETWORK

ABSTRACT OF THE DISCLOSURE

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A multicast method generates a packet-tracking queue with individual entries representing datapackets for transfer through a hierarchical network. The actual datapacket and its real payload are stored as one item in a FIFO buffer.

- 10 Any packet-tracking queue entry representing a multicast datapacket is expanded into several consecutive entries, one each for the individual subscribers enrolled to receive a broadcast. A first of such expanded entries is flagged as being first, and a last such expanded entry is flagged as being last. Each expanded entry may be subject to its own unique service-level policy, with the result that the datapackets can be released and cleared in any order. If the first or last are released, then the next are marked as first or last. When only one expanded entry is left, it will be flagged as being both first and last. When it is released, the entry in the packet-tracking queue is cleared as well as the actual datapacket and its real payload in the FIFO buffer. Such individually delayed releases of the multicast datapackets help enforce the bandwidth limiting function of
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- the service-level policies involved.

TOP SECRET - SOURCE CODE